

**We Claim:**

1. A process for testing genomic DNA for conditions, whether inherited or not inherited, comprising:
- a) making a solution comprising the genomic DNA;
  - b) adding a primer substantially complementary to a diagnostic section of the genomic DNA, selected from the group consisting of a primer having no mismatch bases and a primer having at least one mismatch base;
  - c) mixing a DNA polymerase into the solution;
  - d) amplifying the diagnostic section;
  - e) capturing amplified polynucleotide strands to a solid support; and,
  - f) detecting captured amplified polynucleotide strands.
2. The process of claim 1 wherein capturing amplified polynucleotide strands comprises hybridizing the strands to a probe.
3. The process of claim 2 further comprising denaturing amplified polynucleotide strands to form single-stranded polynucleotides.
4. The process of claim 3 wherein denaturing comprises separating double-stranded polynucleotides with a process selected from the group consisting of heat denaturing and chemical denaturing.
5. The process of claim 4 wherein denaturing comprises chemical denaturing.
6. The process of claim 5 wherein the probe comprises a polynucleotide for hybridizing to amplified polynucleotide strands.
7. The process of claim 6 wherein the solid support comprises a microtiter plate.

8. The process of claim 7 wherein step g comprises adding a reporter label to the solution.
9. The process of claim 8 wherein the reporter label is selected from the group consisting of enzyme labels, fluorescence labels, luminescent labels, vesicle labels and particle labels.
10. The process of claim 9 wherein the reporter label comprises an enzyme label.
11. The process of claim 7 wherein the microtiter plate comprises a well coated with streptavidin.
12. The process of claim 11 wherein the polynucleotide probe further comprises a biotin compound.
13. A process for detecting a mismatch base in a diagnostic section of genomic DNA for conditions, whether inherited or not inherited, comprising:
- a) obtaining the genomic DNA;
  - b) mixing the genomic DNA with a primer substantially complementary to the diagnostic section of the genomic DNA, selected from the group consisting of a primer having no mismatch bases and a primer having at least one mismatch base;
  - c) selectively amplifying the diagnostic section from the genomic DNA;
  - d) capturing amplified polynucleotides to a solid support; and
  - e) quantifying any complex attached to the solid support.
14. The process of claim 13 further comprising separating amplified polynucleotides of step c into single-stranded polynucleotides.
15. The process of claim 14 wherein separating comprises chemical denaturing.

16. The process of claim 15 further comprising attaching a reporter label to the complex for quantifying presence of the complex.

- [illegible]